

## Problem 15

Show that if  $y = \phi(t)$  is a solution of the differential equation  $y'' + p(t)y' + q(t)y = g(t)$ , where  $g(t)$  is not always zero, then  $y = c\phi(t)$ , where  $c$  is any constant other than 1, is not a solution. Explain why this result does not contradict the remark following Theorem 3.2.2.